

forming a sheet from a plurality of long-chain strength supports composed of a metallic material, the sheet comprising a plurality of interstices disposed between the long-chain strength supports, the forming comprising weaving the long-chain strength supports; and

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filling at least a portion of the interstices with a filler, whereby the sheet is made fluid impermeable,

wherein the weaving density is adjustable based upon a desired surface requirement.

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**REMARKS**

***Summary of the Amendment***

Upon entry of the above amendment, claims 19, 21, 22, 24, and 37 will have been amended. Accordingly, claims 1 - 13, 15 - 37, and 39 - 44 currently remain pending.

***Summary of the Official Action***

In the instant Office Action, the Examiner has indicated that claims 16 - 24 and 39 - 44 are allowed, and that claims 37 contains allowable subject matter and would be allowable if presented in an independent form that include the features of its respective base claim and intervening claim. Further, the Examiner has rejected claims 1 - 13, 15, and 25 - 36 over the art of record. By the present amendment and remarks, Applicants submit that the rejections have been overcome, and respectfully request reconsideration of the outstanding Office Action and allowance of the present application.

***Amendment is Proper for Entry***

Applicants submit that, as the instant amendment does not raise any question of new matter nor raise any new issues for consideration by the Examiner, this amendment is proper for entry. In particular, Applicants note that the instant amendment merely places claim 37 into independent and allowable form. Further, as the Examiner appears to have inadvertently indicated that claims 19 - 24 are allowed, instead of containing allowable subject matter but dependent upon a rejected base claim, the present amendment to claims 19, 21, 22, and 24 merely places these claims in the allowed form indicated by the Examiner.

Thus, Applicants request entry of the instant amendment, consideration of the accompanying remarks, and allowance of the instant application.

***Acknowledgment of Allowability and Allowable Subject Matter***

Applicants gratefully acknowledge the Examiner's indication that claims 16 - 24 and 39 - 44 are allowed. However, Applicants assume that, as claims 19 - 24 are dependent from independent claim 1, which has been rejected, the Examiner intended to object to claims 19 - 24 as containing allowable subject matter but dependent upon a rejected base claim.

Accordingly, by the instant amendment, claims 19, 21, 22, and 24 have been presented in independent and allowable form to comply with the Examiner's indication in the Final Office Action.

Further, Applicants gratefully acknowledge the indication that claim 37 contains allowable subject matter and would be allowable if presented in an independent form that

include the features of its respective base claim and intervening claim. Accordingly, Applicants have likewise presented claim 37 into independent and allowable form.

***Traversal of Rejection Under 35 U.S.C. § 102(b)***

Applicants traverse the rejection of claims 1 - 7, 12, 13, 15, 25 - 28, 30 - 32, and 36 under 35 U.S.C. § 102(b) as being anticipated by LIMBACH et al. (U.S. Patent No. 3,612,256) [hereinafter “LIMBACH”]. The Examiner asserts that LIMBACH shows an elastomer covered conveyor belt comprising a support of woven metallic cables, and that, after weaving, the metallic fabric is coated with a latex solution. Applicants traverse the Examiner’s assertions.

Applicants’ independent claim 1 recites, *inter alia*, a *plurality of long-chain strength supports* composed of a *metallic material* and arranged to form interstices and a filler filling at least a portion of the interstices to make said belt *fluid impermeable*. Applicants’ independent claim 25 recites, *inter alia*, forming a sheet from a *plurality of long-chain strength supports* composed of a *metallic material*, the sheet comprising a plurality of interstices disposed between the long-chain strength supports, and at least partially filling the interstices with a filler, whereby the *sheet is made fluid impermeable*. Applicants submit that LIMBACH fails to anticipate at least the above-noted features of the instant invention.

In particular, Applicants note that LIMBACH discloses an elastomer covered conveyor belt that is formed by a belting fabric with reinforcing warps of metallic cables.

However, as the warps are merely parallel strands of metallic cables, LIMBACH fails to disclose long-chain strength supports composed of metallic material, as recited in at least independent claims 1 and 25. Applicants also note that, as the reinforcing warps are parallel strands, there is no disclosure of an arrangement of long-chain strength supports arranged to form interstices, as is likewise recited in at least independent claims 1 and 25.

Further, while LIMBACH discloses that the woven fabric is dipped in a latex solution and heat treated prior to covering with elastomer, there is no disclosure that the resulting belt is fluid impermeable, as recited in at least independent claims 1 and 25, and, as there is no disclosure of long-chain strength supports composed of metallic material and arranged to form interstices, Applicants submit that LIMBACH fails to anticipate a filler at least partially filling the interstices to make the belt fluid impermeable, as recited in at least independent claims 1 and 25.

Applicants also note that LIMBACH fails to provide any disclosure of shaping the belt after the addition of elastomer. Thus, Applicants further submit that LIMBACH fails to anticipate, *inter alia*, smoothing at least one surface of the sheet after filling the sheet, as recited in claim 30; the smoothing comprises treating the at least one surface to remove a portion of the filler, as recited in claim 32. Moreover, as the fabric of LIMBACH is woven around the metallic cable reinforcing warps, Applicant submits that LIMBACH fails to disclose weaving the long-chain strength supports, as recited in claim 36.

As LIMBACH fails to disclose at least the above-noted features, Applicants submit that LIMBACH does not show each and every recited feature of the invention. Thus, Applicants submit that the Examiner has failed to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b), and that the instant rejection is improper and should be withdrawn.

Further, Applicants submit that claims 2 - 7, 12, 13, 15, 26 - 28, 30 - 32, and 36 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims recite additional features that further define the invention. In particular, Applicants submit that LIMBACH fails to anticipate, *inter alia*, the belt supports a paper web in the web producing machine, as recited in claim 2; the long-chain strength supports comprise a metal having a high thermal conductivity, as recited in claim 3; the metal is one of stainless steel and bronze, as recited in claim 4; the long-chain strength supports comprise filaments, as recited in claim 5; the filaments comprise a metal, as recited in claim 6; the long-chain strength supports comprise a substantially circular cross-section, as recited in claim 7; the long-chain strength supports comprise a variable cross-sectional shape along their lengths, as recited in claim 12; the filler comprises a plastic, as recited in claim 13; the fluid is a liquid, as recited in claim 15; the filler comprises a plastic, as recited in claim 26; the long-chain strength supports comprise a metal, as recited in claim 27; the filling further comprises dipping the sheet into a liquid filler, as recited in claim 28; smoothing at least one

surface of the sheet after filling the sheet, as recited in claim 30; the filler comprises a liquid, as recited in claim 31; the smoothing comprises treating the at least one surface to remove a portion of the filler, as recited in claim 32; and the forming further comprises weaving the long-chain strength supports, as recited in claim 36.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1 - 7, 12, 15, 25 - 28, 30 - 32, and 36 under 35 U.S.C. § 102(b) and indicate that these claims are allowable.

***Traversal of Rejection Under 35 U.S.C. § 103(a)***

1. ***Over Limbach***

Applicants traverse the rejection of claims 8 - 11 under 35 U.S.C. § 103(a) as being unpatentable over LIMBACH. The Examiner asserts that the shape of the supports is a design choice. Applicants traverse the Examiner's assertions.

As discussed above, Applicants note that LIMBACH merely discloses the use of parallel metallic reinforcing warps, and fails to teach or suggest long-chain strength supports composed of metallic material and arranged to form interstices, as recited in at least independent claim 1. Moreover, Applicants note that LIMBACH expressly discloses that seven brass plated steel cables twisted into a cord, and seven such cords are twisted to form a wire, and that seven such wires are twisted to form each reinforcing warp.

However, Applicants note that this disclosed arrangement of LIMBACH is quite

specific and there is no further teaching or suggestion of shaping a cross-sectional shape of the reinforcing warps. Thus, contrary to the Examiner's assertions, Applicants submit that the cross-section of the reinforcing warps of LIMBACH is not a mere design choice, instead it is a necessary result of the specific construction of the reinforcing warps, and no teaching of LIMBACH supports the Examiner's assertions of mere design choice.

Thus, Applicants submit that LIMBACH fails to teach or suggest any proper modification which would have rendered unpatentable the instant invention recited in at least independent claim 1.

Further, because LIMBACH fails to teach or suggest that the cross-section of the reinforcing warps can be shaped in the manner set forth in the instant invention, Applicants submit that LIMBACH fails to render unpatentable the features recited in pending claims 8 - 11. In particular, Applicants submit that claims 8 - 11 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims recite additional features that further define the invention. In particular, Applicants submit that no proper modification of LIMBACH teaches or suggests, *inter alia*, the long-chain strength supports comprise a substantially rectangular cross-section, as recited in claim 8; the long-chain strength supports comprise a substantially square cross-section, as recited in claim 9; the long-chain strength supports comprise a substantially oval cross-section, as recited in claim 10; and the long-chain strength supports comprise a polygonal cross-section, as recited

in claim 11.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 8 - 11 under 35 U.S.C. § 103(a) and indicate that these claims are allowable.

2. Over Limbach in view of Ampulski and Stigberg

Applicants traverse the rejection of claims 29 and 33 - 35 under 35 U.S.C. § 103(a) as being unpatentable over LIMBACH in view of AMPULSKI et al. (U.S. Patent No. 6,251,331) [hereinafter “AMPULSKI”] and STIGBERG (U.S. Patent No. 5,196,092). The Examiner asserts that, while LIMBACH does not disclose spraying the elastomeric coating onto the woven structure or smoothing the coating by grinding or scraping, AMPULSKI and STIGBERG disclose such features and that it would have been obvious to modify LIMBACH to include these features.

In addition to the foregoing discussion of LIMBACH, Applicants further note that LIMBACH fails to teach or suggest, *inter alia*, forming a sheet from a plurality of long-chain strength supports composed of a metallic material, in which the sheet comprises a plurality of interstices disposed between the long-chain strength supports, as recited in at least independent claim 25.

Applicants note that neither AMPULSKI nor STIGBERG teach or suggest the subject matter noted above as deficient in LIMBACH. That is, neither document teaches or suggests

a plurality of long-chain strength supports composed of metallic material and/or the interstices disposed between the long-chain strength supports, as recited in at least independent claim 25.

Because none of the applied documents teach or suggest the above-noted features of the instant invention, Applicants submit that no proper combination of these documents can render unpatentable the present invention.

Applicants further note that, as neither AMPULSKI nor STIGBERG teach or suggest a belt including an interwoven metallic material, neither document provides any teaching or suggestion for modifying belt such as disclosed by LIMBACH. Further, Applicants note that, while AMPULSKI discloses the use of an elastomeric material on a belt, the elastomer is provided merely to form an embossible shape to be transferred to the web being processed.

Moreover, as discussed above, Applicants note that LIMBACH fails to provide any teaching or suggestion of processing or shaping of the belt subsequent to the addition of the elastomer. As such, it is not apparent as to whether any subsequent shaping would reduce the effectiveness of the belt design of LIMBACH or limit its usefulness for its intended purpose. While the Examiner asserts that it would have been obvious to modify LIMBACH in view of the teachings of AMPULSKI and STIGBERG, Applicants note that neither AMPULSKI nor STIGBERG are directed to an elastomer belt formed by a fabric woven over metallic reinforcing warps formed in the manner of LIMBACH.

As these secondary documents are directed to completely different structures than that disclosed by LIMBACH, Applicants submit that it would not have been obvious to one ordinarily skilled in the art to combine these documents in the manner set forth by the Examiner, particularly since it is not apparent that the modified belt would operate in the manner intended by LIMBACH.

Accordingly, Applicants further submit that the art of record fails to provide the necessary motivation or rationale for combining the documents in the manner asserted by the Examiner. As such, Applicants submit that no proper combination of LIMBACH, AMPULSKI, and STIGBERG can render unpatentable the invention recited in at least independent claim 25.

Further, Applicants submit that claims 29 and 33 - 35 are allowable at least for the reason that these claims depend from an allowable base claim and because these claims recite additional features that further define the invention. In particular, Applicants submit that no proper combination of LIMBACH, AMPULSKI, and STIGBERG teaches or suggests, *inter alia*, the filling further comprises spraying the sheet with a liquid filler, as recited in claim 29; the treating comprises grinding the at least one surface, as recited in claim 33; scraping at least one surface of the sheet after filling the sheet, as recited in claim 34; the scraping comprises removing a portion of the filler from the at least one surface, as recited in claim 35.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 29 and 33 - 35 under 35 U.S.C. § 103(a) and indicate that these claims are allowable.

***Application is Allowable***

Thus, Applicants respectfully submit that each and every pending claim of the present invention meets the requirements for patentability under 35 U.S.C. §§ 102 and 103, and respectfully request the Examiner to indicate allowance of each and every pending claim of the present invention.

***Authorization to Charge Deposit Account***

If for any reason a check including the amount for any necessary fees is not associated with this file, the Commissioner is authorized to charge to Deposit Account No. 19 - 0089 the amounts identified herein for the missing check, as well as any necessary fees not explicitly identified, including any extensions of time fees required to place the application in condition for allowance by Examiner's Amendment, in order to maintain pendency of this application.

**CONCLUSION**

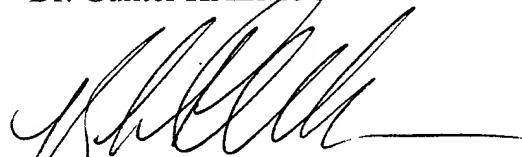
In view of the foregoing, it is submitted that none of the references of record, either taken alone or in any proper combination thereof, anticipate or render obvious the Applicants' invention, as recited in each of claims 1 - 13, 15 - 27, and 29 - 44. The applied references of record have been discussed and distinguished, while significant claimed features of the

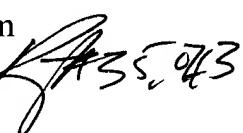
present invention have been pointed out.

Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate.

Respectfully submitted,  
Dr. Gunter HALMSCHLAGER et al.



Neil F. Greenblum  
Reg. No. 28,394 

November 27, 2002  
GREENBLUM & BERNSTEIN, P.L.C.  
1941 Roland Clarke Place  
Reston, VA 20191  
(703) 716-1191